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A NEW SPECIES OF THE GENUS *AMMOPHILA* KIRBY (HYMENOPTERA, SPHECIDAE) FROM CHINA

Li, Q. & M. Xue, 1998. A new species of the genus *Ammophila* Kirby (Hymenoptera, Sphecidae) from China. – Tijdschrift voor Entomologie 140 [1997]: 181-183, figs. 1-9. [ISSN 0040-7496]. Published 26 March 1998.

Ammophila heteroclypeola sp. n. is described from Xingjiang, China. It is closely related to A. clypeola Yang et Li.

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Key words. - Hymenoptera; Sphecidae; Ammophila; new species; China.

Ammophila is the largest genus in the subfamily Sphecinae. It includes 204 medium to large size predatory solitary wasps. Kohl (1906) revised the Palaearctic species, and his work is still a valuable reference for the species identifications. Roth (1928) keyed the species of North Africa. Beaumont (1963) keyed the species of the nasuta group. Tsuneki (1967, 1971a, 1971b, 1971c, 1976) provided informative references and keys for the identification of east Asian forms. Bohart & Menke (1976) revised the genera of Sphecidae of the world, and listed 187 species of Ammophila. Wu & Zhou (1996) keyed the Chinese species.

In the long course of a study on the fauna of Sphecinae from China, we published some descriptive papers (Li et al. 1994; Li & Yang 1989, 1990; Yang & Li 1989). While investigating the second part of the Sphecinae material deposited in the insect collections of the Zhejiang Agricultural University (ICZAU) and the Institute of Zoology, Academia Sinica (ICIZAS), one new species of *Ammophila* was discovered. We follow Bohart and Menke (1976) in the usage of morphological terms. The abbreviations used in the text are as follows.

POD Postocellar distance.

10DP interocular distance at anterior ocellus.

10DC interocular distance at clypeus.

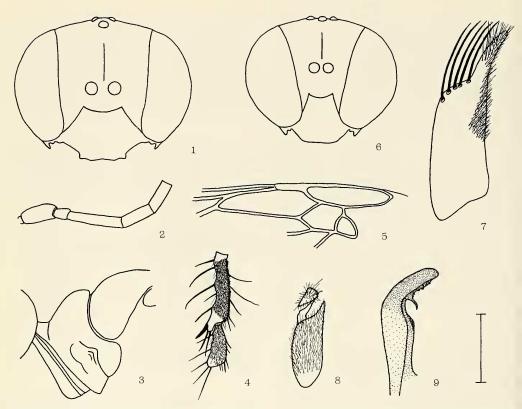
Ammophila heteroclypeola sp. n. (figs. 1-9)

Type material. – Holotype female, China, Xingjiang, Wujiagu, 15.vi.1982, C. Hong, ICZAU. Paratypes (2): 1 female, China, Xingjiang, Yanzhei, 950-1170 m, 6.vii.1958, C. Li, ICIZAS; 1 male, China, Xingjiang, Wusu, 420-460 m, 25.vi.1957, C. Hong, ICIZAS.

Description

Female. – Body length 14.8-15.1 mm. Black; anterior half of tegulae, abdominal petiole, tergites I-IV and sternites II-IV wholly, tergite V and sternite V partly yellowish red; tibia and tarsi of legs, mandibles and antennae brown to dark brown; apical black portion of abdomen without steel blue luster; wings pale yellowish brown, veins brown to dark brown. Upper clypeus and lower frons areas, pronotal lobe, prepectus, mesopleuron and posterior sides of propodeum covered with dense appressed silver hair; gena, prothorax except collar above, mesosternum, metapleuron, metasternum, propodeum except propodeal enclosure, coxae and femora of legs with sparse appressed silver hair; head and thorax with long, erect, white hair.

Clypeus densely punctate, disc slightly bulging, anterior margin with two lateral teeth (fig. 1). Frons densely punctate, without supra-antennal projection. Vertex sparsely punctate. POD: OOD: IODP: IODC =



Figs. 1-9. Ammophila heteroclypeola sp. n. – 1-5, Female; 6-9, Male. 1, Head, frontal view; 2, Antenna; 3, Prothorax, lateral view; 4, Tarsi I-II of fore leg; 5, Forewing; 6, Head, frontal view; 7, Gonostyle, lateral view; 8, Volsella, ventral view; 9, Penis valves, lateral view. – Scale line (mm) for figs. 1, 3: 1.16; 2: 1.00; 4: 0.80; 5, 6: 1.34; 7, 8, 9: 0.32.

22:30:96:72. Relative length of antennal pedicel: flagellomere I: II: III: VIII: IX = 13:48:30:28:18:17.

Pronotal collar (fig. 3) length: width = 34:90, shiny, sparsely punctate, with median furrow. Scutum shiny, sparsely punctate, sides of anterior half and medial region of posterior half irregularly, transversely or obliquely rugose-striate. Scutellum shiny, longitudinally rugose-striate and punctate. Metanotum shiny, densely punctate. Mesopleuron with episternal sulcus, other sculptures covered by dense appressed silver hair. Metapleuron coarsely, irregularly rugose-striate. Propodeal enclosure with a median carina, sides of it irregularly obliquely rugose-striate; lateral area of propodeum coarsely, irregularly rugose-striate.

Submarginal cell III of forewing with petiole (fig. 5). Fore legs with foretarsal rakes (fig. 4); hind leg, relative length of 1st tarsomere: 2nd: 3rd = 115: 65: 53.

Length of abdominal petiole : tergite I : II = 145 : 125 : 108.

Male. - Body length 15 mm. Similar to female. Tergites I-III and sternites II-III wholly, Tergite IV and sternite IV partly yellowish red; mandibles, antennae, wing tegulae, legs, abdomen except yellowish red area dark reddish brown; veins yellowish brown to brown. Anterior margin of clypeus without tooth (fig. 6). POD: OOD: IODP: IODC = 21:30:96:41. Relative length of antennal pedicel: flagellomere I: II : III : VIII : IX = 14 : 46 : 28 : 28 : 17 : 15. Pronotal collar length: width = 40: 86, Scutum coarsely, densely and obliquely rugose-striate. Fore leg without foretarsal rake. Hind leg, relative length of 1st tarsomere : 2nd : 3rd = 110 : 59 : 58. Length of abdominal petiole: tergite I: II = 164: 144: 102. Genitalia: gonostyle (fig. 7), volsella (fig. 8) and penis valves (fig. 9).

Etymology

The name is derived from Greek *hetero* (=different) and *clypeola* (also derived from Greek), the name of its closest relative.

Remarks

This species is closely related to A. clypeola Yang et Li, 1990. It can be easily distinguished from the latter by the clypeal disc being only slightly bulging, the sculpture and punctures of the scutum, metapleuron and propodeum, the coloration of the body, appressed silver hair on clypeus, frons, mesopleuron, metapleuron and lateral area of propodeum, and by the male genitalia.

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REFERENCES

- Beaumont, J. de, 1963. Les Ammophiles palearctiques du groupe de nasuta (Hym. Sphecid.). – Revue Suisse de Zoologie 70: 1-24.
- Bohart, Ř. M. & A. S. Menke, 1976. Specid Wasps of the World, a Generic Revision. – University of California Press, Berkeley, 695 pp.
- Kohl, F. F., 1906. Die Hymenopterengruppe der Sphecinen. III. Monographie der Gattung Ammophila W. Kirby. Abteilung A. Die Ammophilinen der paläarktischen Region. – Annalen des Naturhistorischen Museums in Wien 21: 228-382.
- Li, Q., J. Li, & C. Yang, 1994. A classification study on Ammophila Kirby from Shandong with description of a new species (Hymenoptera: Sphecidae). – Journal of Shandong Agricultural University 25(3): 289-292.

- Li, Q. & C. Yang, 1989. Three new species of Sphecinae in China (Hymenoptera: Sphecidae). – Journal of Shandong Agricultural University 20(4): 33-37.
- Li, Q. & C. Yang, 1990. Four new species of *Ammophila* (Hymenoptera: Sphecidae) from Nei Mongol. Entomotaxonomia 12: 259-266.
- Roth, P., 1928. Les Ammophila de l'Afrique de Nord. Annales de la Société Entomologique de France 97: 153-240.
- Tsuneki, K., 1967. Studies on the Formosan Sphecidae (III), the subfamily Sphecinae with special reference to the genus *Ammophila* in Eastern Asia (Hymenoptera). Etizenia 26: 1-24.
- Tsuneki, K., 1971a. Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei. Sphecidae I-II. – Acta Zoologica Academiae Scientiarum Hungaricae 17: 139-217.
- Tsuneki, K., 1971b. Studies on the Formosan Sphecidae (IX), a supplement to the subfamily Sphecinae (Hym.). Etizenia 53: 1-7.
- Tsuneki, K., 1971c. Spheciden aus der Inneren Mongolei und dem Nordlichen China. – Etizenia 58: 1-38.
- Tsuneki, K., 1976. A fourth contribution to the knowledge of Sphecidae (Hymenoptera) of Manchuria, with remarks on some species of the adjacent regions. – Kontyu, Tokyo 44 (3): 288-310.
- Wu, Y. & Q. Zhou, 1996. Economic insect fauna of China, Fasc. 52, Hymenoptera: Sphecidae. – Science Press, Beijing, 197 pp.
- Yang, C. & Q. Li, 1989. Four new species of the genus Ammophila Kirby from Shanxi Province (Hymenoptera: Shecidae). – Entomotaxonomia 11 (1-2): 105-110.

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